

AMENDMENT TO THE SPECIFICATION

[0012] Although the invention is characterized primarily through identifying characteristics or features of a synthetic fluid-based drilling fluid that has suspension characteristics approximating or approaching those of an aqueous-based drilling fluid containing xanthan gum, it is believed that the advantages of the present invention may be realized with a polymer additive that is preferably a co-polymer or terpolymer, comprising mostly hydrophobic monomers with a smaller amount of hydrophilic monomers. To be considered hydrophilic, the monomer should generally have a solubility of above about 3 % by weight in water at room temperature, and to be considered hydrophobic, the monomer should generally have a solubility of below about 3% by weight in water at room temperature (about 20°C). The polymer preferably should be substantially linear and substantially free of aromatic hydrocarbons. In one embodiment, the polymer contains about 40 to about 100% by weight C₆₋₁₀ alkyl acrylate. A most preferred polymer for comprising the additive of the invention is the emulsion copolymer of 2-ethylhexyl acrylate and acrylic acid in about a 99:1 ratio, although ratios with higher quantities of acrylic acid have been found effective. For example, 85:15 (2-ethylhexyl acrylate to acrylic acid) has been found acceptable even at temperatures as high as about 350°F.